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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/617,853	07/17/2000	Thomas C. Naratil	4034-22	8319

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EXAMINER

COLBERT, ELLA

ART UNIT PAPER NUMBER

3624

DATE MAILED: 04/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/617,853

Applicant(s)

NARATIL, THOMAS C.

Examiner

Ella Colbert

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-15 are pending. Claims 1 and 14 have been amended in this communication filed 01/28/04 entered as Amendment A with a 2 month Extension of Time, paper no. 7.

2. The Applicant is respectfully requested to note that the Examiner handling the prosecution of this application has changed and all future correspondence should be addressed to Examiner E. Colbert.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

the claimed invention is directed to non-statutory subject matter.

4. Claim 15 is rejected under 35 U.S.C. 101 because the claimed invention is directed to an abstract idea without having a practical application or useful or concrete or tangible result.

Referring now to the subject claim identified above, the claimed invention is a data processing method ...” as recited in claim 15. There is no limitation that recites a pre-computer process or post-computer activity. All process activity takes place within the computer. The claims are, therefore, not statutory under these safe harbors.

The claim must then be reviewed to see if it is directed to a practical application, i.e. if it produces a “useful, concrete and tangible result” (MPEP 2600.II.A.). Claim 1 recites limitations of a process in terms of a mathematical algorithm as discussed above. The claimed invention processes data “stores information pertaining to

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customer and user position, executes trade orders, and applies a price improvement process". The claimed invention does not produce a "useful, concrete and tangible result. (See MPEP 2106.IV.B.2(b).ii for discussion of practical application). For example, the claimed process is not limited to a practical application of the data processing method for storing information, executing trade orders, and applying a price".

Therefore, the broadly recited steps of claim 15 is "not within the 'technological arts'" and does not satisfy the statutory requirements of 35 U.S.C. 101.

The claimed invention, therefore, is directed to non-statutory subject matter, i.e. an abstract idea without limitation to a practical application and is analyzed as non-statutory subject matter under 35 U.S.C. 101 (See AT & T Corp. v. Excel Communications, Inc., 172 F.3d 1352, 1356-57, 50 USPQ2d 1447, 1451 (Fed. Cir.), cert. Denied, 528 U.S. 946 (1999), and State Street Bank & Trust Co. v. Signature Fin. Group, Inc., 149 F. 3d 1368, 1373, 47 USPQd 1596, 1601 (Fed. Cir. 1998), cert. Denied, 119 S.Ct. 851 (1999).

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner cannot determine from Applicant's Specification what Applicant means by "Liquid Agency". Applicant is respectfully

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requested to point out in the Specification where this limitation is defined and to clarify the limitation in the claim language.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
9. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over (US 5,905,974) Fraser et al, hereafter Fraser in view of (US 6,505,174) Keiser et al, hereafter Keiser.

As a Preliminary matter: The recitation "automated trading of U.S. Treasury, Liquid Agency, and Zero Coupon STRIP financial instruments" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural

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limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

As per claim 1, Fraser teaches, A computer-implemented system for automated trading of U.S. Treasury, Liquid Agency, and Zero Coupon STRIP financial instruments, comprising: an updatable system database (col.5, lines 2-6) and a system proprietor operative to determine a national best bid and offer price and a derived price for each financial instrument in the offering inventory (col. 8, lines 6-20), the system proprietor being further operative to apply a price improvement process to a trade in the event that an offsetting trade occurs, and to update the system database and the offering inventory to reflect transactions executed by the system (col. 7, lines 46-57) .

Fraser failed to teach, an updatable offering inventory database which receives real time price and quantity information pertaining to each financial instrument from a market data feed. Keiser teaches, an updatable offering inventory database which receives real time price and quantity information pertaining to each financial instrument from a market data feed (col. 3, lines 64-67 and col. 4, lines 1-8). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have an updatable offering inventory database which receives real time price and quantity information pertaining to each financial instrument from a market data feed and to modify in Fraser because such a modification would allow Fraser to have a feed that dominates a stream of financial market data messages transferred from a single source to one or more message destinations.

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As per claim 2, Fraser teaches, A computer-implemented system for automated trading of U.S. Treasury, Liquid Agency, and Zero-Coupon STRIP financial instruments as recited in claim 1, further comprising means for canceling or revising orders (col. 6, lines 51-67, col. 7, lines 1-8, col. 11, lines 26-35, and col. 17, lines 5-31).

As per claim 3, Fraser teaches, A computer-implemented system for automated trading of U.S. Treasury, Liquid Agency, and Zero-Coupon STRIP financial instruments as recited in claim 1, wherein the system notifies a user that an order has been executed by the system (col. 3, lines 1-7).

As per claim 4, Fraser failed to specifically teach, A computer-implemented system for automated trading of U.S. Treasury, Liquid Agency, and Zero-Coupon STRIP financial instruments as recited in claim 1, further comprising means for allowing a user to manually update the offering inventory. However, Fraser did teach, a unique keypad that is used to input information (col. 8, lines 31-36). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a means for allowing a user to manually update the offering inventory and to modify in Fraser because such a modification would allow Fraser to have an efficient input system for the fast paced trading activity.

As per claim 5, Fraser teaches, A computer-implemented system for automated trading of U.S. Treasury, Liquid Agency, and Zero-Coupon STRIP financial instruments as recited in claim 1, further comprising means for automatically updating the offering inventory (col. 12, lines 31-48).

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As per claim 6, Fraser teaches, A computer-implemented system for automated trading of U.S. Treasury, Liquid Agency, and Zero-Coupon STRIP financial instruments as recited in claim 1, comprising updating the national best bid and offer price or the derived price of a financial instrument in the offering inventory (col. 13, lines 2-66 and col. 14, lines 1-21).

As per claim 7, Fraser failed to teach, A computer-implemented system for automated trading of U.S.Treasury, Liquid Agency, and Zero-Coupon STRIP financial instruments as recited in claim 1, wherein the market data feed is provided by at least one Interdealer Broker, but it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the market data feed provided by at least one Interdealer Broker and to modify in Fraser because such a modification would allow Fraser to have the ability to match trades between dealers only and to market bids and offers, also known as offerings, to the dealers without disclosing the name of the potential buyers and sellers until a bid and offer is matched.

As per claim 8, Fraser failed to teach, A computer-implemented system for automated trading of U.S.Treasury, Liquid Agency and Zero-Coupon STRIP financial instruments as recited in claim 7, wherein the market data feed is reformatted to record-based data prior to entry into the system, but it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the market data feed reformatted to record-based data prior to entry into the system and to modify in Fraser because such a modification would allow Fraser to have financial market data received from many financial exchanges throughout the world and to produce output messages

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with a standardized message format for delivery to customer destinations throughout the region.

As per claim 9, Fraser teaches, A computer-implemented system for automated trading of U.S.Treasury, Liquid Agency, and Zero-Coupon STRIP financial instruments as recited in claim 1, further comprising a filter process for removing incorrect market data from the offering inventory (col. 5, lines 33-36 and col. 7, lines 58-61).

As per claim 10, Fraser teaches, A computer-implemented system for automated trading of U.S.Treasury, Liquid Agency, and Zero-Coupon STRIP financial instruments as recited in claim 1, wherein the derived price is calculated by (a) determining the captured spread between a last transaction price and a desired benchmark for a financial instrument (col. 6, lines 44-59); (b) determining the current existing price of the desired benchmark (col. 9, lines 1-22); and (c) adding the captured spread to the current existing price (col. 4, lines 10-14 and col. 6, lines 57-62).

As per claim 11, Fraser teaches, A computer-implemented system for automated trading of U.S. Treasury, Liquid Agency, and Zero-Coupon STRIP financial instruments as recited in claim 1, wherein the system proprietor generates a confirmation of the executed order (col. 3, lines 46-57 and col. 8, lines 6-20).

As per claim 12, Fraser did not specifically teach, A computer-implemented system for automated trading of U.S. Treasury, Liquid Agency, and Zero-Coupon STRIP financial instruments as recited in claim 1, wherein the system allows the user to manually enter interfirm or dealer to dealer trades for execution. However, Fraser does

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teach using a "unique keypad" to enter information. This is interpreted as a manual process of entering interfirm or dealer to dealer trades for execution by a user.

As per claim 13, Fraser teaches, A computer-implemented system for automated trading of U.S. Treasury, Liquid Agency, and Zero-Coupon STRIP financial instruments as recited in claim 12, wherein the system automatically updates the offering inventory in accordance with the manual trade (col. 8, lines 31-60).

As per claim 14, Fraser teaches, A computer-implemented system for automated trading of high liquidity financial instruments, comprising: a computerized workstation for executing trades (col. 4, lines 58-62); a system processor for processing information pertaining to user position (col. 4, line 67-col. 5, lines 1-6),

Fraser teaches, updatable offering inventory and real time market data for U.S. Treasury, Liquid Agency (col. 2, lines 1-41), but fails to teach, Zero-Coupon STRIP financial instruments and a system proprietor for determining national best bid and offer price from the market data, the system proprietor being operative to convert the national best bid and offer price to a derived price in the event the national best bid and offer price is not available, the system proprietor being further operative to provide a customer with an improved bid and offer price in the event that an offsetting trade occurs, whereby the system proprietor executes automatic trades at the national best bid and offer price or the derived price based on orders entered into the system (col. 7, lines 46-57 and col. 8, lines 6-20).

Fraser failed to teach, Zero-Coupon STRIP financial instruments. However, Zero-Coupon STRIP financial instruments are well known in the art of securities

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instruments trading. By definition a Zero-coupon STRIP is strips are zero-coupon bonds created from coupon bonds, essentially, each coupon payment and the principal are traded as separate securities. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have an updatable offering inventory and real time market data for Zero-Coupon STRIP financial instruments and to modify in Fraser because such a modification would allow Fraser to have a T-note that can be taken component by component and broken down into zero-coupon bonds with different maturities.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over (US 5,905,974) Fraser et al, hereafter Fraser in view of (US 5,987,432) Zusman et al, hereafter Zusman and further in view of (US 6,505,174) Keiser et al, hereafter Keiser.

As per claim 15, Fraser teaches, A data processing method for the automatic execution of high liquidity financial instruments, comprising: storing information pertaining to customer and user position and offering inventory (col. 6, lines 44-59).

Fraser failed to teach, the offering inventory including a real time market data feed. Zusman teaches, the offering inventory including a real time market data feed (col. 1, lines 25-34). It would have been obvious to one having ordinary skill in the art at

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the time the invention was made to have the offering inventory include a real time market data feed and to modify in Fraser because such a modification would allow Fraser to have only the raw trading information reported by floor brokers which does not usually include derivative financial data such as accumulated volume, price extremes over selected time intervals, statistical trends, and consolidated data for securities traded on several independent exchanges.

Fraser and Zusman failed to teach, executing trade orders based on a national best bid and offer price or a derived price in the event the national best bid and offer price is not available; and applying a price improvement process to the national best bid and offer price or the derived price in the in the event that an offsetting trade occurs.

Keiser teaches, executing trade orders based on a national best bid and offer price or a derived price in the event the national best bid and offer price is not available; and applying a price improvement process to the national best bid and offer price or the derived price in the in the event that an offsetting trade occurs (col. 5, lines 7-40). It would have been obvious to one having ordinary skill in the art at the time the invention was made to execute trade orders based on a national best bid and offer price or a derived price in the event the national best bid and offer price is not available; and applying a price improvement process to the national best bid and offer price or the derived price in the in the event that an offsetting trade occurs and to modify in Fraser because such a modification would allow Fraser to have the ability to determine interest rate and security threshold constants by using global interest threshold constants which monitor inflationary and deflationary pressures in the system.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure. The Applicant is respectfully requested to review the prior art of record here below prior to responding to this Office Action.

Herschkorn (US 6,691,094) disclosed an interdealer broker (see col. 3, lines 4-20).

Naratil, Thomas (WO 02/07039) Inventor/Applicant for this application.

Levitt, Arthur disclosed the importance of transparency in America's debt market in a speech at the Media studies Center in New York, N. Y. on September 9, 1998.

Lange (US 6,321,212) disclosed a trading exchange for the trading of financial instruments.

Togher et al (US 6,014,627) disclosed an electronic brokerage system sealing with a particular financial instrument.

Nybo, P. Anders, Mah, Stephanie K., and Needham, Charlotte L. disclosed a review of electronic transaction systems in the U.S. fixed income securities markets, dealer systems, and competitive bidding auction systems.

Soderlind, Paul and Svensson, Lars E. O. disclosed extracting information from financial instruments.

Risberg et al (US 5,339,392) disclosed financial instruments and financial instruments analysis.

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Inquiries

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ella Colbert whose telephone number is 703-308-7064. The examiner can normally be reached on Monday-Thursday from 6:30 am -5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent Millin can be reached on 703-308-1038. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



E. Colbert
April 2, 2004